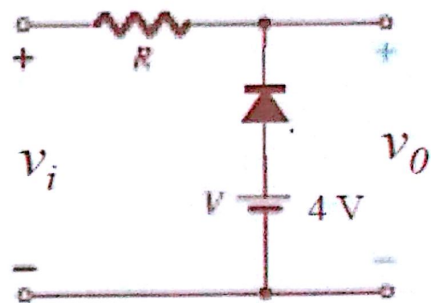
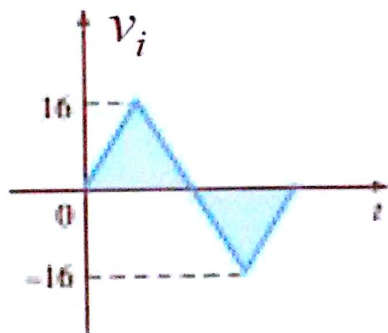
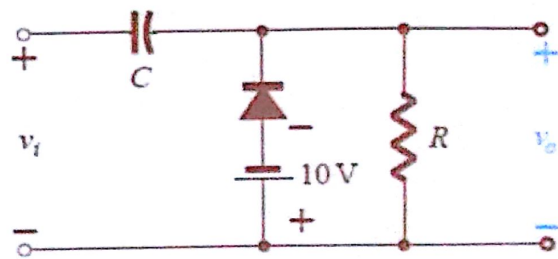
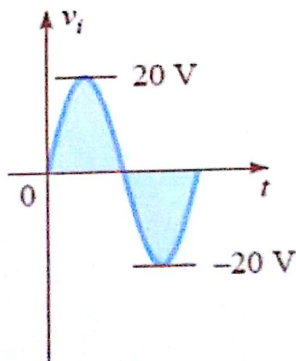


## Clipper and Clamper

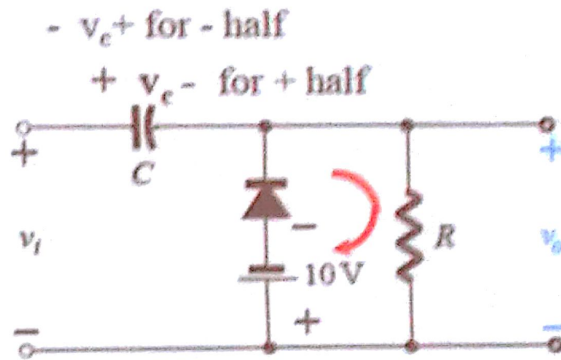
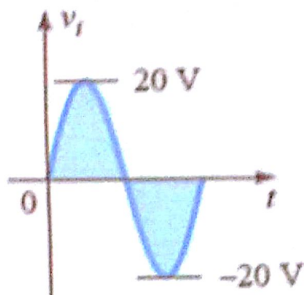
1. Determine  $v_o$  for the network shown in below (Consider ideal diode)



2. Determine  $v_o$  for the network shown in below (consider ideal diode)



2. Determine  $v_o$  for the network shown in below (consider ideal diode)



Ans. For ideal diode forward bias zero resistance.

|          | $v_i$ | $V_o$ Apply kvl along dc, diode, R,;                         |
|----------|-------|--|
| $t=0$    | 0     | Apply kvl along dc, diode, R,; $-10V-0V-0-V_o=0$ ; $V_o=10V$ |
| $T=T/4$  | 20v   | $-10V-0V-20V-V_o=0$ ; $V_o=30V$                              |
| $T=T/2$  | 0v    | $-10V-0V-0V-V_o=0$ ; $V_o=10V$                               |
| $T>T/2$  | -10V  | $-10V-0V+10V-V_o=0$ ; $V_o=0V$                               |
| $T=3T/4$ | -20V  | $-10V-0V+20V-V_o=0$ ; $V_o=-10V$                             |

